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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/552,657	04/19/2000	Tomohiro Nakajima	0557-4969-2	2974

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EXAMINER

PHAN, JAMES

ART UNIT PAPER NUMBER

2872

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/552,657

Applicant(s)

NAKAJIMA, TOMOHIRO

Examiner

James Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3,5-8,12 and 14-35 is/are pending in the application.
- 4a) Of the above claim(s) 5-8,18-31 and 34 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3 and 14-17 is/are allowed.
- 6) ☒ Claim(s) 12,32,33 and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 21.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 11/13/02 has been considered by the examiner.

### ***Election/Restrictions***

Newly submitted claims 32-33 and 35 read on the elected species and thus, they have been grouped with the claims of the elected species. Claims 34 directed to the embodiment 2 (Fig. 7) or 3 (Fig. 8) or 4 (Fig. 9) which is a non-elected elected species and which does not require an aperture or a restriction unit positioned at or close to a crossing point of light beams; thus, claim 34 is withdrawn from further consideration.

### ***Claim Objections***

Claim 12 is objected to because of the following informalities: the phrase "an aperture situated ... . shape the light" in lines 9-10 is a repetition of the phrase recited in lines 7-8. Either one of these phrases should be deleted. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 32-33 and 35 are rejected under 35 U.S.C. 102(a) as being anticipated by Nakajima et al '345.

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Nakajima et al '345 discloses a multibeam scanning apparatus which comprises a light source unit (LD1,LD2) for emitting light beams cross each other at a point partially on a deflection surface (see "Note" below) of a deflection unit (reflective surface of polygon mirror; Figs. 4A and 19A); the deflection unit (polygon mirror 403) for deflecting the light beams.

In re claim 35 the periphery of each of the polygon mirror deflection surfaces has been taken as an aperture or restriction unit for shaping the light beams.

Note: Nakajima et al discloses that the light beams cross/intersect each other in the vicinity of the reflective surface of a polygon mirror (column 9, lines 14-16; column 12, lines 33-35); However, Figs. 4A and Fig. 19A show the intersection of the light beams at a polygon mirror reflective surface. Thus, "the light beams cross/intersect each other in the vicinity of the reflective surface of a polygon mirror" has been interpreted as the light beams cross/intersect each other at a point partially on the reflective surface of a polygon mirror.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima et al '345 in view of Takada.

Nakajima et al '345 discloses a multibeam scanning apparatus which comprises a light source unit (LD1,LD2) for emitting light beams cross each other at a point

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partially on a deflection surface (see "Note" on page 3) of a deflection unit (reflective surface of polygon mirror; Figs. 4A and 19A); the deflection unit (polygon mirror 403) for deflecting the light beams, an optical unit (scan lens 404) for imaging the deflected light beams on a scanned surface (photosensitive drum 407; Fig. 6). Nakajima et al '345 does not disclose an aperture between the light source and the polygon mirror for shaping the light beams emitted from the laser diodes. However, the use of an aperture between the light source and the polygon mirror for shaping the light beams emitted from the laser diodes is well known in the art. Takada discloses a multibeam scanning apparatus which comprises a light source unit (501) for emitting light beams which cross each other at a point; a deflection unit (polygon mirror 504) for deflecting the light beams, an optical unit (scan lens 506) for imaging the deflected light beams on a scanned surface (507), and a light beam restricting unit (aperture 503) disposed between the light source and the polygon mirror for shaping the light beams emitted from the laser diodes (Fig. 42). Thus, it would have been obvious to one skilled in the art at the time the invention was made to apply the teaching of Takada in Nakajima et al '345 for the purpose stated in Takada.

***Allowable Subject Matter***

Claims 2-3 and 14-17 are allowed.

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### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (703) 308-4810. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (703) 305-0024. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Phan, J.  
August 11, 2003

  
James Phan  
Primary Examiner